

MITES OF THE GENUS *LONGOLAE LAP S*

(ACARINA: LAELAPTIDAE)¹

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The genus *Longolaelaps* was erected in 1926 by Vitzthum for a mite collected from *Rattus whiteheadi* in Sumatra. It was differentiated from *Laclaps* by its elongate body shape. There has been some doubt as to the validity of this genus, but the discovery of two undescribed species from the same general area strengthens the concept of *Longolaelaps* as being a distinct unit. Aside from the body shape, all three known species have a peculiar transverse striated presternal area, apparently unique for these mites.

Stradtman and Wharton (1958) have discussed the taxonomic position of *Longolaelaps* and have given a bibliography to the genus.

KEY TO THE SPECIES OF *LONGOLAE LAP S*

- 1. No strong spinelike setae ventrally on trochanter I 2
 Two strong spinelike setae ventrally on trochanter I **longulus** Vitzthum
- 2. Anal plate truncate anteriorly, separated from epigynial plate by less than length of anal opening **whartoni**, new species
 Anal plate convex anteriorly, separated from epigynial plate by more than length of anal opening **traubi**, new species

Longolaelaps longulus Vitzthum

Longolaelaps longulus Vitzthum, 1926, *Trenbia* 8 (1-2): 74-79.

Female.—Medium sized, elongate mite, measuring 620 μ long, exclusive of gnathosoma, by 300 μ wide at region of coxa III. Dorsum: Dorsal plate entire, covering most of idiosoma, about 550 μ long by 290 μ wide, with a small heavily sclerotized ridge extending along edge of anterior third, with 38-40 pairs of setae and 7 pairs of pores; lateral setae increase in length from anterior to posterior; most of median setae extending slightly past bases of setae of next row. Gnathosoma: Six rows of 2-4 teeth on deutosternum; chelicerae with each arm of chelae containing two teeth and a terminal tooth; pilus dentatus straight, ending in a small recurved hook. Venter: Tritosternum with well serrated laeinae arising above attachment to basal segment; sternal plate with concave anterior margin and convex posterior margin with protruding center, about 100 μ long at midline by 120 μ wide at maximum width, with the usual 3 pairs of setae and 2 pairs of pores; anterior pair of sternal setae about half as long as the two equal-length posterior pairs; area of presternal transverse striations about half as long as sternal plate; metasternal plates with metasternal setae which extend to bases of first pair of epigynial setae; epigynial plate with 4 pairs of setae, the most

¹The material for this study was taken from collections made by Lt. Col. Robert Traub and associates. The initial work was done while the senior author was on duty at the U. S. National Museum, Washington, D. C. Acknowledgement is made to Tom Evans, Clearwater, Florida, who made the drawings for figures 1-6.

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posterior pair only three-fourths as long as anterior 3 pairs; epigynial plate removed from anal plate by more than length of anal opening; anal plate egg-shaped with adanal setae arising posterior to anal opening, post-anal seta slightly stronger than adanals; with small serrations at posterior end of plate; stigmata located between coxae III and IV, peritremes extending anteriorad and dorsad ending at level of middle of coxa II; 6 pairs of setae on nonsclerotized portion of venter. Legs: Coxa I with two heavy spinelike setae, anterior one blunted, posterior one finger-like; venter of trochanter I with 1 strong, long, pointed and 1 strong, short, blunted spinelike seta, dorsum with 1 long, pointed spinelike seta; femur I expanded, venter with 1 strong, pointed spinelike seta, dorsum with 2 long, sharp setae and 1 long dorsal spinelike seta, and laterad with 1 strong, short seta; genu I and tibia I each with 1 small lateral spinelike seta; coxa II with a long, sharp, anterior seta and with a strong, pointed posterior spinelike seta; trochanter II with 2 small spinelike setae; femur II enlarged, with 3 short ventral spinelike setae and with 2 long dorsal spinelike setae; coxa III with a strong, sharp anterior spinelike seta, and with a small, pointed posterior spinelike seta; trochanter III with 1 weak, elongate anterior spinelike seta; coxa IV with a single small seta; trochanter IV with an anterior and posterior weak, elongate spinelike seta; other setae of legs not strongly spinelike.

This species can be easily separated from the two others by the two strong spinelike setae on the venter of trochanter I, the three small spinelike setae on the venter of femur II, and the egg-shaped anal plate.

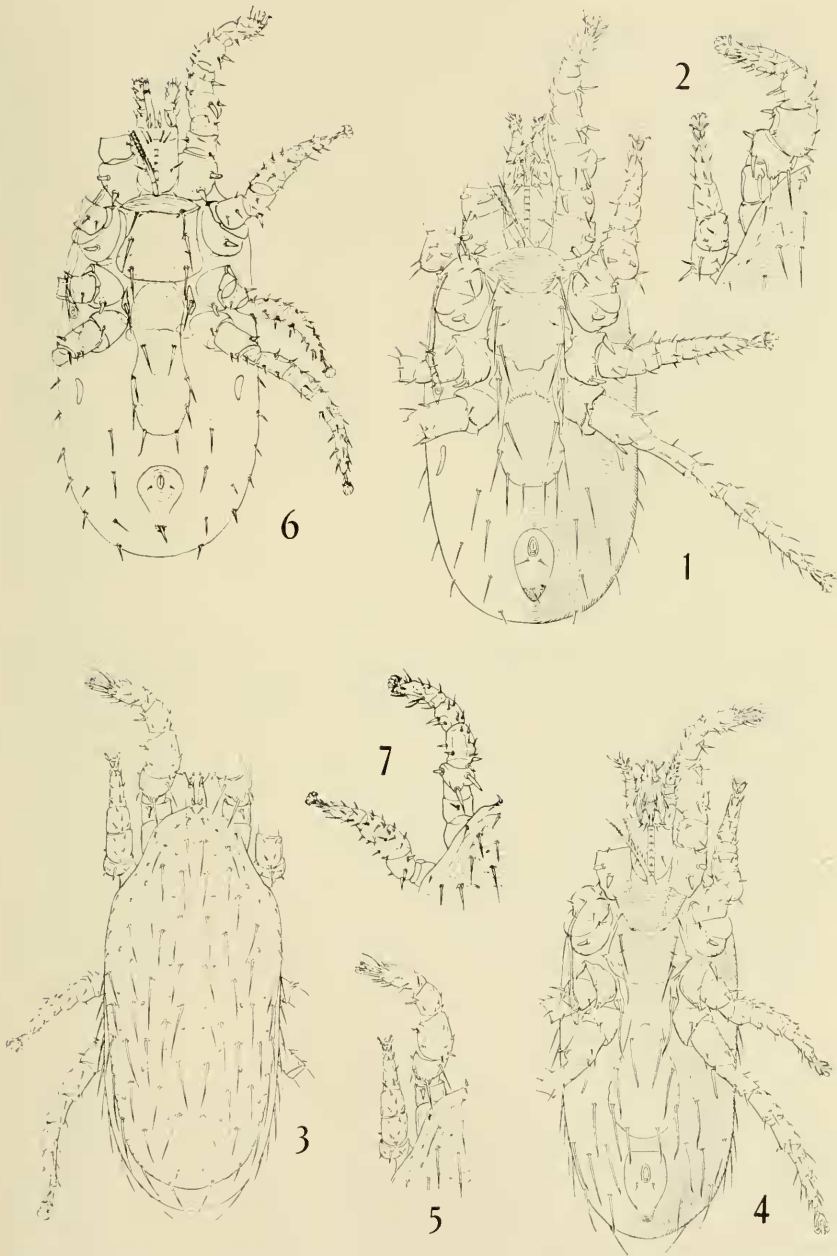
The type is in Vitzthum's private collection. It was collected from *Rattus whiteheadi* by Karry and Siebers, November 29, 1921, at Urwald, Wai Lima, Lampong, South Sumatra. Specimens examined were collected as follows (all collections were made by Robert Traub unless otherwise stated):

Rattus whiteheadi whiteheadi: North Borneo, Mt. Kinabalu, Paring, July 14, 19, 20, and October 9, 1953; North Borneo, Ranau, July 12, and August 1, 1953; Malaya, Selangor, Subang, March 19 and 25, 1948 (R. Traub and C. B. Philip); Malaya, Pahang Road, 16 miles N. Kuala Lumpur, July 27, 1948. *Rattus eremoriventer*: North Borneo, Ranau, July 11, 1953. *Rattus rajah* group: North Borneo, Ranau, July 13, 1953. *Rattus* sp. (*fulvescens* or *alticola*): Malaya, Cameron Highlands, Brinchong Hill, July 20, 1948 (R. Traub and B. Insoll, colrs.). *Hylomys suillus*: North Borneo, Mt. Kinabalu, Tenompok, August 17, 1953. *Dremomys everetti*: North Borneo, Mt. Kinabalu, Tenompok, August 17, 1953. *Callosciurus notatus*: Malaya, Selanger, Pahang Road, 16 miles N. Kuala Lumpur, June 25, 1948.

Longolaelaps whartoni, new species

(Figs. 3-5)

Female.—Medium sized, elongate mite, measuring 600μ long, exclusive of gnathosoma, by 275μ wide at region of coxa III. Dorsum: Dorsal plate entire, covering most of idiosoma, about 570μ long by 250μ wide, with a small heavily sclerotized ridge extending along edge of anterior fifth, with 38-40 pairs of setae and 11 pairs of pores; anterior-lateral setae very short, most other setae extending past bases of next row of setae. Gnathosoma: Six rows of 3-5 teeth on deutoster-



Longolaclaps longulus Vitzthum: Fig. 1, ventral view; fig. 2, dorsal view of legs I and II. *L. whartoni*, n. sp.: fig. 3, dorsal view; fig. 4, ventral view; fig. 5, dorsal view of legs I and II. *L. traubi*, n. sp.: fig. 6, ventral view; fig. 7, dorsal view of legs I and II.

num; chelicerae with each arm of chelae containing 2 teeth and a terminal tooth; pilus dentatus fingerlike, ending in small recurved hook. Venter: Tritosternum with well serrated laeinae arising above attachment to basal segment; sternal plate with concave anterior border and slightly convex posterior border, about 80μ long at midline by 115μ wide at maximum width, with the usual 3 pairs of setae and 2 pairs of pores; anterior pair very short, not exceeding bases of second pair of setae; area of presternal transverse striations almost as long as sternal plate; metasternal plates with very long metasternal setae which extend well past bases of first pair of epigynial setae; the epigynial plate swollen posteriorly and removed from anal plate by less than length of anal opening, with 4 pairs of setae, the most posterior pair the shortest; anal plate truncate anteriorly with adanal setae arising posterior to anal opening, the post-anal seta minute, much shorter than adanals, with the usual serrations at posterior end of plate; stigma located at posterior edge of coxa III, peritremes extending anteriorad and dorsad and ending at level of anterior edge of coxa II; 6 pairs of long setae on non-sclerotized portion of venter. Legs: Coxa I with 2 strong spinelike setae, the anterior blunted, the posterior dully pointed; trochanter I with 1 pointed dorsal spinelike seta; femur I expanded, with 2 long and 1 short, pointed dorsal spinelike seta; genu I and tibia I each with 1 small lateral spinelike seta; coxa II with a long, sharp, anterior seta, and a strong, pointed, posterior spinelike seta; femur II extended laterally with 1 small dorsal spinelike seta; coxa III with a heavy pointed anterior spinelike and a small posterior seta; coxa IV with 1 small seta; other setae of legs not strongly spinelike.

This species is easily separated from the others in that there are no strong spinelike setae on the venter of femur I, coxa III has a small posterior seta, the epigynial plate nearly touches the anal plate, the anal plate is truncate anteriorly, and the post-anal seta is minute.

This species is named for G. W. Wharton, of the Department of Zoology, University of Maryland, in recognition of the time, energy, and inspiration he freely gives to his students.

Holotype.—Female, U. S. National Museum No. 2484, collected from *Rattus rajah* group, Malaya, Selangor, Pahang Road, 16 miles N. Kuala Lumpur, July 2, 1948.

Other specimens examined are as follows: ex *Rattus rattus argentiventer*: Seven females, Malaya, Selangor, Subang, August 18, 1948 (R. Traub and B. Insoll).

Longolaclaps traubi, new species

(Figs. 6, 7)

Female.—Medium sized, elongate mite, measuring 680μ long, exclusive of gnathosoma, by 320μ wide at region of coxa III. Dorsum: Dorsal plate entire, covering most of idiosoma, about 580μ long by 300μ wide, with a small heavily sclerotized ridge extending along anterior third, with 38-40 pairs of setae and 9 pairs of pores; most lateral setae short, most medial setae not extending past bases of next row of setae. Gnathosoma: Six rows of 3-5 teeth on deutosternum; chelicerae with each arm of chelae containing 2 teeth and a terminal tooth; pilus dentatus fingerlike, ending in a small recurved hook. Venter: Tritosternum with

well serrated lacinae arising above attachment to basal segment; sternal plate with very slightly concave anterior margin and a slightly convex posterior margin, about 120μ long at midline by 130μ wide at maximum width, with the usual three pairs of setae and two pairs of pores; anterior pair of sternal setae slightly shorter than posterior pairs; area of presternal striations much less than half as long as sternal plate; metasternal plates with metasternal setae which do not extend to bases of first pair of epigynial setae; epigynial plate removed from anal plate by more than length of anal opening, with 4 pairs of short equal-length setae; anal plate roughly kite-shaped with small adanal setae arising slightly ahead of posterior edge of anal opening, the post-anal seta stronger than adanals, and with a small series of serrations at posterior end of plate; stigma located between coxae III and IV, peritremes extending anteriorad and dorsal, ending at middle of coxa I; 6 pairs of setae on non-sclerotized portion of venter. Legs: Coxa I with 2 strong spinelike setae, the anterior blunted, the posterior dully pointed; trochanter I with 1 small dorsal spinelike seta; femur I expanded, with 1 strong ventral spinelike seta, with 2 long, sharp dorsal setae and 1 small dorsal spinelike seta; genu I and tibia I each with 1 small lateral spinelike seta; coxa II with a small anterior seta and a strong pointed posterior spinelike seta; femur II enlarged, with 1 ventral and 3 short dorsal spinelike setae; coxa III with a strong, sharp anterior spinelike seta, and a strong posterior spinelike seta; coxa IV with a single small seta; other setae of legs not strongly spinelike.

This species can be easily separated from the other two in that there is a strong spinelike seta on the venter of femur I, the metasternal setae do not extend beyond the bases of the first pair of epigynial setae, the adanal setae arise anterior to the posterior edge of the anal opening, and the post-anal seta is spinelike, stronger than the adanals.

This species is named for Lt. Col. Robert Traub, Medical Service Corps., U. S. Army.

Holotype.—Female, U. S. National Museum No. 2485, collected from *Rattus alticola*, North Borneo, Mt. Kinabalu, Tenompok, August 12, 1953.

The following specimens have been examined: ex *Rattus alticola*: One female, North Borneo, Mt. Kinabalu, Paring, July 13, 1953. ex *Rattus whiteheadi whiteheadi*: Six females, North Borneo, Mt. Kinabalu, Tenompok, August 18, 1953. ex *Rattus sabanus*: One female, North Borneo, Mt. Kinabalu, Tenompok, August 13, 1953.

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